

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

1-9. (canceled)

10. (new) A method for measuring at least one characteristic property of a pneumatic tyre for a vehicle wheel, comprising:

arranging at least one array of deformable sensors along a first direction;

making the tyre pass at speed over the at least one array of sensors along a second direction;

generating, for each sensor, an electrical signal proportional to a speed of deformation of the sensor when the tyre contacts the sensor;

detecting the electrical signal generated by each sensor; and

determining, starting with the detected electrical signals, the at least one characteristic property of the tyre;

wherein the second direction is a motion direction of the tyre,

wherein the first direction is transverse to the second direction, and

wherein the at least one array of sensors extends in the first direction for a distance greater than or equal to a dimension of the tyre in the first direction.

11. (new) The method of claim 10, wherein the at least one characteristic property of the tyre is a size of a footprint area of the tyre along the second direction.

12. (new) The method of claim 10, wherein the at least one characteristic property of the tyre is a shape of a footprint area of the tyre.

13. (new) The method of claim 10, wherein the at least one characteristic property of the tyre is a distribution of pressure acting on a footprint area of the tyre.

14. (new) The method of claim 10, wherein the speed of the tyre is greater than or equal to 30 kilometers per hour.

15. (new) The method of claim 10, wherein the at least one array of sensors is housed in a seat formed on a drum of a wheel simulating a road surface.

16. (new) The method of claim 10, wherein the at least one array of sensors is housed in a seat formed on a road surface.

17. (new) The method of claim 10, wherein the at least one array of sensors is associated with a support plate.

18. (new) A method for measuring at least one characteristic property of a pneumatic tyre for a vehicle wheel, comprising:

arranging a plurality of arrays of deformable sensors along a first direction;

making the tyre pass at speed over the plurality of arrays of sensors along a second direction;

generating, for each sensor, an electrical signal proportional to a speed of deformation of the sensor when the tyre contacts the sensor;

detecting the electrical signal generated by each sensor; and

determining, starting with the detected electrical signals, the at least one characteristic property of the tyre;

wherein the second direction is a motion direction of the tyre,

wherein the first direction is transverse to the second direction,

wherein the plurality of arrays of sensors extends in the first direction for a distance greater than or equal to a dimension of the tyre in the first direction, and

wherein the arrays of sensors are arranged substantially in parallel.

19. (new) The method of claim 18, wherein the at least one characteristic property of the tyre is a size of a footprint area of the tyre along the second direction.

20. (new) The method of claim 18, wherein the at least one characteristic property of the tyre is a shape of a footprint area of the tyre.

21. (new) The method of claim 18, wherein the at least one characteristic property of the tyre is a distribution of pressure acting on a footprint area of the tyre.

22. (new) The method of claim 18, wherein the speed of the tyre is greater than or equal to 30 kilometers per hour.

23. (new) The method of claim 18, wherein the plurality of arrays of sensors is housed in a seat formed on a drum of a wheel simulating a road surface.

24. (new) The method of claim 18, wherein the plurality of arrays of sensors is housed in a seat formed on a road surface.

25. (new) The method of claim 18, wherein the plurality of arrays of sensors is associated with a support plate.